

Polymers and Polymerization

USSR

UDC 541.15

KABANOV, V. YA., CHALYKH, A. YE., ALIYEV, R. E., LUK'YANOVICH, V. M., and SPITSYN, V. I., Institute of Physical Chemistry, Academy of Sciences USSR, Moscow

"Electron Microscope Study of Charge Centers in  $\gamma$ -Irradiated Polymers"

Moscow, Doklady Akademii Nauk SSSR, Vol 205, No 2, 1972, pp 393-395

Abstract: Investigation of the charge on polymers as a function of radiation was performed. The IR spectra of the unirradiated polyethylene films show no evidence of polarized acid groups. Samples were irradiated for about 0.5 minutes at 30 rads/sec from a  $\text{Co}^{60}$  source. The irradiation produced surface patterns on the films which were then studied under the electron microscope. Fourteen of the electron micrographs are reproduced in the article. Surface patterns were not obtained on the surfaces when the plastics were treated in the form of metal organosols. The charged centers retain their charge when the films are submerged in a medium with a high dielectric constant, such as water. Thus the charged centers are fixed and the topography of particular distributions which is significant in studying the effects of radiation is preserved.

1/1

2/2 014

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118077

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SINGLE CRYSTALS OF LA SUB2 BA SUB3(BD SUB3)SUB4 WERE PREPD. UNDER SYNTHESIS CONDITIONS CLOSE TO THOSE FOR THE SYNTHESIS OF DOUBLE BORATES OF RARE EARTHS AND SR AT 1100DEGREES. THE LIQ. AND THE SOLID PHASE WERE ANALYZED RELATIVE TO THE LA AND B CONTENT. THE LA SUB2 BA SUB3(BD SUB3)SUB4 CRYSTALS ARE COLORLESS AND ARE STABLE TO A SHARP DROP IN THE TEMP. FROM 1100DEGREES TO ROOM TEMP. LU SUB2 BA SUB3(BD SUB3)SUB4 WAS SYNTHESIZED BY GRADUALLY HEATING TO 700-800DEGREES A STOICHIOMETRIC MIXT. OF LU SUB2 O SUB3, H SUB3 BO SUB3, AND BACO SUB3 IN A PT CRUCIBLE. THE MIXT. WAS HELD AT 700-800DEGREES FOR 6 HR, WHEREUPON IT WAS COOLED, GROUND, AND FIRED AT 1000DEGREES FOR 3 HR. PERIODICALLY THE MIXT. WAS TAKEN OUT OF THE FURNACE, COOLED, CAREFULLY GROUND, AND AGAIN FIRED. THE IR ABSORPTION SPECTRA FOR LA SUB2 BA SUB3(BD SUB3) SUB4 AND LU SUB2 BA SUB3(BD SUB3)SUB4 ARE PRESENTED. THE M.P.S. WERE 1400DEGREES FOR LA SUB2 BA SUB3(BD SUB3) SUB4 AND 1100DEGREES FOR LU SUB2 BA SUB3(BD SUB3)SUB4.

FACILITY: INST. OBSHCH. NEORG. KHIM. IM. KURNAKOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--DOUBLE BORATES OF RARE EARTH ELEMENTS AND BARIUM OF THE COMPOSITION  
LN SUB2 BA SUB3 (BO SUB3) SUB4 -U-  
AUTHOR-(03)-DZHURINSKIY, B.F., ALIYEV, O.A., TANANAYEV, I.V.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 592-3  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--BORATE, RARE EARTH METAL, BARIUM COMPOUND, LANTHANUM,  
LUTETIUM, SINGLE CRYSTAL  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--1996/0908 STEP NO--UR/0363/70/006/003/0592/0593  
CIRC ACCESSION NO--AP0118077  
UNCLASSIFIED

USSR

ALIYEV, N. A., and VADYKOV, CH. CH., *Unobtainable and Available Chemicals*, No. 4, 1975, pp. 44-45

(3-methyl-4-chlorophenyl)-, 124. The following compounds were obtained: N-phenyl-, m.p. 59-60°C; N-(4-chlorophenyl)-, 42-43; N-(3,4-dichlorophenyl)-, 34-35; N-(3-methyl-4-bromophenyl)-, 44-45; N-(3-methyl-4-chlorophenyl)-, 51-52; N-(3-chloro-4-methylphenyl)-, 46-50; and N-(3-chlorophenyl)- a liquid, b.p. 267-77°C,  $d_4^{20}$  1.0335.

USSR

USSR

ALINOV, N. M., KIDYROV, CH. SH. The synthesis of the herbicidal activity of plant substances, Trakhtent, Academy of Sciences USSR 1971.

"Synthesis of Herbicides and Fungicides in a Series of 2,4-Dichlorophenyl Acid Arylamides. 1"

Trakhtent, Khimicheskoye Nauchnoye Zhurnal, 1971, 1, 1-10.

Abstract: A series of 2,4-dichlorophenyl acid arylamides and 2,4-dichlorophenyl acid was synthesized and their herbicidal activity was studied. No biological data appear in this paper. The mixture of 0.05 g-mole of the acid and 0.05 g-mole of the amine, and 0.05 g-mole of methylamine in 50 ml of anhydrous benzene was refluxed in a round-bottom flask equipped with a reflux condenser, a mechanical stirrer, and a funnel. To this mixture 0.05 g-mole of the amine was added. After 10 min. the mixture was cooled, the mixture filtered, and the residue washed with water and 5% hydrochloric acid solution and water, and the filtrate and washings were recrystallized. The following 2,4-dichlorophenyl acid arylamides were obtained: N-phenyl-, m.p. 151-152°C; N-(o-chlorophenyl)-, m.p. 151-152°C; N-(4-chlorophenyl)-, 150-151; N-(3,4-dichlorophenyl)-, 151-152; N-1/2

Pesticides

USSR

UDC 632.95

KADYROV, CH. SH., ALIYEV, N. A., and BARASHKIN, V. A., Institute of the Chemistry of Vegetable Matter, Academy of Sciences Uzbek SSR

"Method of Producing Gamma-(nitrophenoxy)-butyric Acids"

USSR Authors' Certificate No 329164, Cl. C 07 c 51/18, C 07 c 79/00, C 07 c 50/22, filed 5 Mar 70, published 27 Mar 72 (from RZh-Khimiya, No 20, 25 Oct 72 by T. A. Belyayeva)

Translation: A method is suggested for producing gamma-(nitrophenoxy)-butyric acids by the interaction of gamma-butyrolactone (I) with  $\text{NO}_2\text{C}_6\text{H}_4\text{ONa}$  at a temperature of  $150-155^\circ$  in DMPA. The resultant compounds can be employed as plant growth regulators. 24.15 g of  $m\text{-NO}_2\text{C}_6\text{H}_4\text{ONa}$ , 14.2 g of I and 22.8 ml of DMPA are heated and simultaneously stirred for 2 hours at a temperature of  $150-155^\circ$ , cooled to  $100-105^\circ$ , treated with 50 ml of hot water, and acidified with HCl (acid). An ether is extracted and treated with an  $\text{NaHCO}_3$  solution. Bicarbonate extracts are acidified, and 23.7 g of gamma-(*m*-nitrophenoxy)-butyric acid, melting point  $114-5^\circ$  (benzene-hexane 1:1), are obtained. Gamma-(*p*-nitrophenoxy)-butyric acid, melting point  $122-3^\circ$  (benzene-hexane), is analogously obtained.

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USSR

ALEKSANDROV, A. P., et al., Optika i Spektroskopiya, Vol 29, No 6, Dec 70, pp 1064-1069

$C_{nh}$ ,  $S_n$ ,  $D_n$ ,  $D_{nd}$ ,  $D_{nh}$  with  $n \geq 2$  remain constant in atom substitutions on the isolated axis of molecular symmetry  $\alpha$ , coinciding with the principal axis  $\alpha$  of the inertia tensor.

3. The partial derivatives  $\frac{\partial I_{\alpha\alpha}}{\partial q}$  and constants  $t_{\alpha\alpha}$  of molecules belonging to the point groups  $C_n$ ,  $C_{nv}$ ,  $C_{nh}$ ,  $S_n$ ,  $D_n$ ,  $D_{nd}$ ,  $D_{nh}$  with  $n \geq 3$  and  $V_d$  remain constant in atom substitutions on the isolated axis of symmetry  $\alpha$ , coinciding with the principal axis  $\alpha$  of the inertia tensor.

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USSR

UDC 539.194.01

ALEKSANDROV, A. P., ALIYEV, M. R., and ALEKSANYAN, V. T.

"Isotopic Relations Between Centrifugal Expansion Constants of Polyatomic Molecules"

Leningrad, Optika i Spektroskopiya, Vol 29, No 6, Dec 70, pp 1064-1069

Abstract: The article formulates a number of general relations between the centrifugal expansion constants of polyatomic molecules of the product rule and sum rule type. Relations are obtained for a number of particular cases which are important in practice. The following conclusions are stated:

1. Isotopic substitution of an atom in the center of gravity of a molecule leaves unchanged the values of all derivatives  $\frac{\partial I_{\alpha\alpha}}{\partial q}$ ,  $\frac{\partial I_{\alpha\beta}}{\partial q}$  and the corresponding  $\tau$ -constants.

2. The partial derivatives  $\frac{\partial I_{\alpha\alpha}}{\partial q}$  and constants  $\tau_{\alpha,\alpha,\alpha,\alpha}$  of molecules belonging to the point groups  $C_n$ ,  $C_{nv}$ ,  $1/2$



USSR

ALIYEV, M. N., EYGELIS, YU. K., and LENCHITSKIY, A. Z.

"Epizootiological Zoning of Natural Plague Foci Located in the Azerbaydzhan SSR"

Baku, Izvestiya Akademii Nauk Azerbaydzhanskoy SSR, Seriya Biologicheskikh Nauk, No 1, 1971, pp 131-135

Abstract: Three natural plague foci are located within the Azerbaydzhan SSR: the focus of the valley-foothill area of Eastern Transcaucasia, the focus in the Transcaucasian mountains, and the focus of the semi-desert area of the Nakhichevan' ASSR. All are shown on a map. The rodent vectors of plague at these three foci are *Meriones erythrourus*, the common vole (*Microtus arvalis*) and Vinogradov's gerbil, respectively. Rodents of other species become infested to some extent with infected fleas and may play a role in epizootics. The regions of the foci consist of a zone in which plague is persistent and surrounding zones in which epizootics are sporadic. In the area of the southeastern inclines of the Minor Caucasus, where the gerbils *Meriones persicus* and *Meriones tristrami* occur, a culture of *P. pestis* was isolated from the carcass of a dead cat and three strains of *P. pestis* of low virulence were isolated from ticks collected from lambs.

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USSR

UDC 911.3:616.981.452(479.2)

EYGELIS, Yu. K., ALIYEV, M. N., LENCHITSKIY, A. Z., and MAMEDZADE, U. A.

"Present Structure and History of Natural Plague Foci in Transcaucasia"

V sb. Probl. osob. opasn. infektsiy (Problems of Especially Dangerous Infections -- collection of Works), Saratov, No 4(14), 1970, pp 58-62 (from RZh-Meditsinskaya Geografiya, No 3, Mar 71, Abstract No 3.36.113) by B. Dobrokhotoy

Translation: There are at present three autonomous zones in the Transcaucasian territory, which have natural plague foci. In the plain-foothill part of East Transcaucasia, the focal activity is maintained by red-tailed Libyan jirds, *Xenopsylla conformis* and *Ceratophyllus laeviceps* fleas. In the Armenian highlands on the alpine and subalpine meadows and mountainous plains, the enzootic is usually maintained by the common vole and by the fleas *C. caspius*, *C. consimilis* and *Frontopsylla elata*. In the semiarid zone of Nakhichevan Autonomous ASSR -- Vinogradov's gerbils, *X. conformis* and *C. iramus* fleas. The history of the origin of plague foci in Transcaucasia is described and is linked to the scattering of gerbils from the Iran-Afghanistan desert and to the special features of the course of the epizootic disease in various regions of focal activity. In spite of the common origin of all three natural foci, at present a link between them seems very unlikely.

1/1

2/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70  
 CIRC ACCESSION NO--AP0105070  
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ELEC. COND., THERMAL EMF. (ALPHA SUBO), MAGNETOTHERMAL EMF. (DELTA ALPHA INFINITY), AND THE HALL COEFF. WERE MEASURED IN TE DOPED IN SUBO.5 GA SUBO.5 SB (CONCN. OF CARRIERS, N EQUALS 3 TIMES 10 PRIME17-6 TIMES 10 PRIME18-CM PRIME3), 300DEGREE SK. THE STRUCTURE OF THE CONDUCTION BAND (IS SMALLER THAN OR EQUAL TO N EQUALS 6 TIMES 10 PRIME18-CM PRIME3) AGREES WITH THE PREDICTION OF THE KANE THEORY (1957). BECAUSE THE EXPTL. POINTS ALPHA SUBO(N) AND DELTA ALPHA INFINITY (N) LIE WITH GOOD ACCURACY ON THE THEORETICAL CURVES CALCD. FOR THE SCATTERING OF ELECTRONS ON OPTICAL PHONONS, IT CAN BE CONCLUDED THAT THIS MECHANISM PREDOMINATES IN IN SUBO.5 GA SUBO.5 SB SOLID SOLN. CRYSTALS (AT 300DEGREE SK AND 3 TIMES 10 PRIME17 IS SMALLER THAN N IS SMALLER THAN 6 TIMES 10 PRIME18-CM PRIME3).  
 FACILITY: INST. FIZ., BAKU, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--STRUCTURE OF THE CONDUCTION BAND AND MECHANISM OF ELECTRON  
SCATTERING IN IN SUB0.5 GA SUB0.5 SB -U-  
AUTHOR-(03)-ZEINALOV, S.A., ALIYEV, S.A., ALIYEV, M.I.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(2), 389-91

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SEMICONDUCTOR BAND STRUCTURE, THERMAL EMF, SEMICONDUCTOR  
CONDUCTIVITY, HALL CONSTANT, ELECTRON PHONON INTERACTION, ANTIMONIDE,  
GALLIUM COMPOUND, INDIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/1996

STEP NO--UR/0449/70/004/002/0389/0391

CIRC ACCESSION NO--AP0105070

UNCLASSIFIED

2/2 032 UNCLASSIFIED PROCESSING DATE--23OCT70  
 CIRC ACCESSION NO--AP0120424  
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INFRARED SPECTRA WERE OBTAINED FOR  
 COARSE, POLYCRYST. SAMPLES OF (INSB) SUBX MINUS (INTE) SUB1 NEGATIVE X  
 SOLID SOLNS. PRODUCED BY DIRECT MELTING OF THEIR COMPONENTS AND  
 HOMOGENIZATION BY HEATING FOR 200 HOURS AT 450DEGREES. THE VALUE OF X  
 RANGED FROM 0.999 TO 0.99999. CURVES INDICATE THE SPECTRAL RELATION OF  
 REFLECTION AND TRANSMISSION COEFFS. IN THE 2-25 MU RANGE AS WELL AS THE  
 RELATION BETWEEN THE EFFECTIVE MASS OF CONDUCTION ELECTRONS AND COMPN.  
 THE EFFECTIVE MASS INCREASED FROM 0.013 AT X EQUALS 0.99999 TO 0.063 AT  
 X EQUALS 0.999. THE ABSORPTION COEFF. ALPHA (H OMEGA) WAS OBTAINED FROM  
 TRANSMISSION SPECTRA; THE ABSORPTION CROSS SECTION OF LIGHT FOR  
 ELECTRONS, (ALPHA DIVIDED BY N), IN THE COMPN. RANGE 0.85 SMALLER THAN  
 OR EQUAL TO 0.85 SMALLER THAN OR EQUAL TO X SMALLER THAN OR EQUAL TO  
 0.999, OBTAINED AT 7 MU, CHANGED FROM 4.3 TIMES 10 PRIME NEGATIVE17 TO 7  
 TIMES 10 PRIME NEGATIVE17 CM PRIME2. FACILITY: INST. POLUPROV.,  
 LENINGRAD, USSR.

UNCLASSIFIED

1/2 032 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--OPTICAL PROPERTIES OF INSB SUBX MINUS INTE SUBI NEGATIVE X SOLID  
SOLUTIONS -U-  
AUTHOR-(04)-GASANLY, N.M., ALIYEV, M.I., KUKHARSKIY, A.A., SUBASHIYEV,  
V.K.  
COUNTRY OF INFO--USSR  
SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(3), 576-8  
DATE PUBLISHED-----70  
  
SUBJECT AREAS--PHYSICS  
TOPIC TAGS--OPTIC PROPERTY, IR SPECTRUM, POLYCRYSTAL, INDIUM ANTIMONIDE,  
ABSORPTION COEFFICIENT  
  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--1997/1712 STEP NO--UR/0449/10/0047004/0516/0518  
CIRC ACCESSION NO--AP0120424  
UNCLASSIFIED

2/2 028 UNCLASSIFIED PROCESSING DATE--2300170  
 CIRC ACCESSION NO--AP0123760  
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE GAMMA RESONANCE SPECTRA OF  
 COPOLYMERS MADE OF FERROCENE AND ETOME AND PHTHALIC ANHYDRIDE WERE  
 REPORTED IN CONJUNCTION WITH DETN. OF THE AMT. OF THE OXIDIZED FORM OF  
 FE IN SUCH POLYMERS FROM THE AMT. OF OXIDIZING AGENT CONSUMED. THE  
 COPOLYMER WITH MECDET WAS OXIDIZED TO SMALLER THAN OR EQUAL TO 60PERCENT  
 OF ITS FE CONTENT, WHILE THE COPOLYMER WITH PHTHALIC ANHYDRIDE WAS  
 OXIDIZABLE TO 45PERCENT. THE COPOLYMER WITH PHTHALIC ANHYDRIDE HAVING  
 THE MAX. LEVEL OF OXIDN., RELATIVE TO FERROCENE AND WITH MIN. PROGRESS  
 OF SECONDARY REACTIONS CONTAINED SOME 35PERCENT OXIDIZED FE ACCORDING TO  
 SPECTRAL DATA AND 50PERCENT ACCORDING TO CHEM. DETN. THIS COPOLYMER WAS  
 PREPD. WITH A ZNCL SUB2 CATALYST IN 5 HR AT 150DEGREES IN AN AUTOCLAVE;  
 THE SUBSTANCE WAS GENERALLY INSOL. THE OXIDNS. WERE DONE WITH K SUB2 CR  
 SUB2 O SUB7 IN ACDH OR WITH A FECL SUB3 SOLN. IN AQ. KCL.  
 FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--RESONANCE SPECTROSCOPIC STUDY OF OXIDIZED STATES IN FERROCENE  
COPOLYMERS -U-  
AUTHOR-(06)-ALIYEV, L.A., VISHNYAKOVA, T.P., PAUSHKIN, YA.M., PENDIN,  
A.A., SOKOLINSKAYA, T.A., STUKAN, R.A.  
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 306-10

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GAMMA SPECTRUM, FERROCENE, COPOLYMER, PHthalic ANHYDRIDE, ZINC  
CHLORIDE, OXIDATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1979

STEP NO--UR/0062/70/000/002/0306/0310

CIRC ACCESSION NO--AP0123760

UNCLASSIFIED



2/2 024 UNCLASSIFIED PROCESSING DATE--27NOV70  
CIRC ACCESSION NO--AP0135157  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MOL. WT. DISTRIBUTION OF  
POLY(VINYLPYRIDINIUM ETHYL BROMIDE) (I) OBEYS THE KINETIC THEORY  
PROPOSED EARLIER (V. A. KARGIN ET AL. 1965, 1966, 1968) AT LESS THAN OR  
EQUAL TO 0.1 MONOMER FRACTION CONVERSION. HOWEVER, AT HIGHER  
CONVERSIONS THERE IS NO AGREEMENT BETWEEN THE EXPTL. RESULTS, OBTAINED  
BY ULTRACENTRIFUGING, AND THE THEORY. THE DISAGREEMENT IS PARTIALLY  
DUE TO THE INSOLY. OF I AND THE GROWTH OF THE LIVING POLYMER CHAINS,  
WHICH WERE NOT TAKEN INTO ACCOUNT IN THE ORIGINAL THEORY.  
FACILITY: INST. NEFTEKHIM. SIN. IM. TOPCHIEVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--MOLECULAR WEIGHTS AND MOLECULAR WEIGHT DISTRIBUTION OF THE PRODUCTS  
OF SPONTANEOUS POLYMERIZATION OF QUATERNARY SALTS OF 4,VINYLPYRIDINE AND  
AUTHOR-(03)-MUSTAFAYEV, M.I., ALIYEV, K.V., KABANDV, V.A.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(4), 855-64

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--MOLECULAR WEIGHT, VINYL COMPOUND, PYRIDINE, BROMINATED ORGANIC  
COMPOUND, KINETIC THEORY, MONOMER, POLYMERIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3006/1496

STEP NO--UR/0459/70/012/004/0855/0864

CIRC ACCESSION NO--AP0135157

UNCLASSIFIED

USSR

UIC 615.6:647.532.6753

SATAYEV, A. G., NAYIM, S. I., and ALIKOV, M.

"The Processing of High-Paraffin Gas Condensates from Deposits in Southern Mubarek and Adamtash"

Dokl. AN USSR, (Reports of the Academy of Sciences, U.S.S.R.), No 6, pp 44-46, 1960 (from Referativnyy Zhurnal Khimii, No 6, Vol 2, 10 Feb 70, Abstract No 3 P184)

Translation: The possibility of using paraffinous gas condensates from deposits in southern Mubarek and Adamtash as raw materials for platforming was tested. The experiments were performed on a laboratory installation charged with 300 ml of commercial Al-Pt catalyst at a pressure of 30-40 atm, space velocity of raw material input of 0.5 hr<sup>-1</sup> and temperature 480°. Platformates produced, with the addition of the corresponding heads, are high quality motor vehicle fuels with octane number 66 for southern Mubarek platformate and 67 for Adamtash platformate.

A. A. A.

USSR UDC: [537.226+537.311.33]: [539.3+536.21+536.63+536.63]

KAMINOV, I. M., KATHEV, M. K., and GILBERSHMAN, G. I.

"Free Path Length of Phonons in Solids (Magnetite)"

Sb. nauchn. soobshch. khar'kov. un-t po yadern. i tekh. n.  
(Scientific Messages, Leningrad University of Engineering and Tech-  
nical Sciences--collection of works) 1970, Part 1, p. 11-11  
(from RZh-Fizika, No. 11, 1971, Abstract No. 11B829)

Translation: The average free path length of phonons is determined for magnetite from the expression  $\lambda = 1/5C \cdot \langle v \rangle \cdot \langle l \rangle$ . The thermal conductivity  $\lambda$  and the thermal capacitance  $C$ , are experimentally determined, while  $\langle v \rangle$  is found by averaging  $\langle v \rangle^2 = v_L^2 + 2v_T^2$ . Comparison is made with the results obtained from the Leibfried-Schleerman formula for computing three-phonon collisions. It is concluded that the important role in magnetite is played by other dispersion mechanisms promoting the small quantity  $l$  (of the order of the lattice constant).

2/2 010

UNCLASSIFIED

PROCESSING DATE--040670

CIRC ACCESSION NO--ATO139806

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE RELATION BETWEEN THE PROTEIN SYNTHETIZING SYSTEMS OF THE NUCLEUS AND THE CHLOROPLAST DURING THE GROWTH OF ETIOLATED PEA SEEDLINGS WAS STUDIED. THE FORMATION OF THE PHOTOSYNTHETIC APP. IS CONTROLLED BY BOTH SYSTEMS. STRUCTURAL PROTEIN SYNTHESIS DURING THE FORMATION OF CHLOROPLASTS INVOLVES CYTOPLASMIC 80 S RIBOSOMES INSENSITIVE TO CHLORAMPHENICOL. AFTER COMPLETION OF THE LAMELLAR ORGANIZATION OF CHLOROPLASTS THE SYNTHESIS OF STRUCTURAL PROTEINS INVOLVES 70 S RIBOSOMES AND IS INHIBITED BY ANTIBIOTICS. FACILITY: INST. FIZIOL. BIOFIZ. RAST., DUSHANBE, USSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--TWO SYSTEMS OF PROTEIN SYNTHESIS DURING THE FORMATION OF PEA  
SEEDLING CHLOROPLASTS -U-  
AUTHOR-(02)-NASYROV, YU.S., ALIYEV, K.  
COUNTRY OF INFO--USSR  
SOURCE--DOKL. AKAD. NAUK TADZH. SSR 1970, 13(4), 50-2  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--PROTEIN SYNTHESIS, CHLOROPLAST, NUCLEUS  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY FICHE NO----FD70/605006/E10 STEP NO--UR/0425/70/013/004/0050/0052  
CIRC ACCESSION NO--AT0139806  
UNCLASSIFIED

USSR

NASYROV, Yu. S., et al., Doklady Akademii Nauk Tadzhikskoy SSR, No 9, 1971, pp 53-60

incorporation of  $C^{14}$ -labeled leucine into the chloroplast proteins was sharply inhibited by ultraviolet during the first 10 to 30 hours of exposure of the etiolated seedlings. It was concluded that the molecular mechanism of action of high-altitude radiation on photosynthesis is controlled by the inhibition of light-inducible transcription of RNA into DNA of the plastids and suppression of protein synthesis.

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# Phytology

USSR

UDC 581.132

NASYROV, Yu. S., Corresponding Member, Academy of Sciences Tadzhik SSR, ABDURAKHMANOVA, Z. M., ERGASHEV, A., and ALIYEV, K., Institute of Plant Physiology and Biophysics, Academy of Sciences, Tadzhik SSR

"Mechanism of Action of High-Altitude Ultraviolet Radiation on the Development and Functional Activity of the Photosynthetic Apparatus"

Dushanbe, Doklady Akademii Nauk Tadzhikskoy SSR, No 9, 1971, pp 53-60

Abstract: Ten-day-old etiolated pea seedlings were exposed to sunlight for 4 to 5 days, during which time measurements were made of the photosynthetic assimilation of  $C^{14}O_2$  and content of chlorophyll, nucleic acids, and proteins in the subcellular structures. Appreciable amounts of chlorophyll did not form until 7 to 10 hours after exposure. There was a correlation between the formation of chlorophyll and assimilation of  $C^{14}O_2$ , which persisted for 20 hours, after which the pigment content stabilized while the assimilation of carbon continued to increase rapidly. Total RNA decreased sharply the first 10 to 20 hours and then increased. Light-dependent RNA synthesis in the chloroplasts was much more sensitive to ultraviolet radiation than RNA synthesis in the nuclei. The protein-synthesizing system of the chloroplasts was more sensitive than the other subcellular structures. The

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USSR

UDC: 624.042.7

RASSKAZOVSKIY, V. T. and ALIYEV, I. Kh.

"Application of Random Process Correlation Theory Analysis to Seismic Stability of Buildings"

Tashkent, Izvestiya akademii nauk Uzbekskoy SSR -- Seriya tekhnicheskikh nauk, No. 4, 1970, pp 20-24

Abstract: The purpose of this paper is to compute the mean-square value of linear system reactions with one degree of freedom from accelerograms of earthquakes acting on the system. The authors construct the correlation function for several accelerograms of different intensity, and derive an expression for the mean-square value of the seismic force acting on the system. Using the differential equation for the system motion with attenuation according to the Kelvin-Voigt hypothesis, they determine the mean-square value of the dynamicity factor for various attenuations. Accelerograms as well as the correlation time and predominating frequencies corresponding to them are plotted from this value.

2/2 027

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0124379

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEPENDENCE OF THERMAL COND. (LAMBDA) ON TEMP. WAS STUDIED FOR SE, POLY(VINYL CHLORIDE), PHENOLPHTHALEIN AND POLYAMIDE RESINS IN THE 20-110DEGREES RANGE. CHANGES IN LAMBDA DURING THE TRANSITION FROM THE GLASSY TO THE VISCOELASTIC STATE ARE CLASSIFIED AS FOLLOWS: (1) SMALL CHANGES IN THE MOL. FREE PATH (L), K., AND PHONON PROPAGATION RATE (V) CAUSE ONLY SMALL CHANGES IN LAMBDA DUE TO MOL. VIBRATIONS (LAMBDA PRIME) AND TO MOL. ROTATIONAL MOTION (LAMBDA PRIME PRIME), SINCE LAMBDA EQUALS LAMBDA PRIME PLUS LAMBDA PRIME PRIME; (2) L, D., AND V CHANGE AND LAMBDA PRIME DECREASES SO FAST THAT LAMBDA CHANGES ARE ALMOST WHOLLY DEPENDENT ON LAMBDA PRIME CHANGES; (3) CHANGES OF L, D., V, AND THEREFORE OF LAMBDA PRIME ARE COMPENSATED FOR BY THE DECREASE OF LAMBDA PRIME PRIME SO THAT LAMBDA REMAINS NEARLY CONST. FACILITY: INST. FIZ., BAKU, USSR.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--CHANGE IN THE THERMAL CONDUCTIVITY OF AMORPHOUS POLYMERS DURING  
THEIR TRANSITION FROM THE VITREOUS TO THE HIGHLY ELASTIC STATE -U-  
AUTHOR-(03)-MAMEDALIYEVA, G.G., ABDINOV, P.SH., ALIYEV, G.M.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(6), 1393-5 (PHYS CHEM)

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--THERMAL CONDUCTIVITY, AMORPHOUS POLYMER, TEMPERATURE  
DEPENDENCE, SELENIUM, POLYVINYL CHLORIDE, PHENOLPHTHALEIN, POLYAMIDE  
RESIN, VISCOELASTICITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--2000/0709

STEP NO--UR/0020/70/190/006/1393/1395

CIRC ACCESSION NO--AT0124379

UNCLASSIFIED

3/3 012 UNCLASSIFIED PROCESSING DATE--16OCT70  
CIRC ACCESSION NO--AP0118042  
ABSTRACT/EXTRACT--AFTER TAKING INTO CONSIDERATION ALL THE POSSIBLE  
'MECHANISMS, THE TEMP. DEPENDENCE OF THE THERMAL COND. OF THE COMPOS.  
STUDIED GIVES A LINE WHICH IS PARALLEL TO THE T AXIS; I.E. WITHIN THE  
TEMP. RANGE INVESTIGATED IT REMAINS ALMOST CONST. AND HAS LOW VALUES  
(SIMILAR TO 10 PRIME NEGATIVE 4 CAL-CM SEC DEGREE). THE DETN. OF THE  
FREE PATH LENGTH OF THE PHONONS FROM HEAT CAPACITY, D., AND SOUND  
VELOCITY VALUES FOR CRSE (POSSESSING THE HIGHEST LAMBDA SUBLATTICE)  
GIVES VALUES OF SIMILAR TO 2.5-3 ANGSTROM, I.E. OF THE ORDER OF  
INTERPLANAR SPACINGS. FACILITY: INST. FIZ., JAKU, USSR.

UNCLASSIFIED

2/3 012

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0118042

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COMPOS. BETA CRSE, CR SUB7 SE SUB8, CR SUB2 SE SUB8, NICK SUB2 SE SUB4, VCR SUB2 SE SUB4, AND FEGR SUB2 SE SUB4 CRYSTALLIZE IN THE MONOCLINIC B8 STRUCTURE AND ARE DEFECTIVE, WITH ORDERED VACANCIES PRESENT. UPON THE TRANSITION FROM BETA-CRSE TO CR SUB2 SE SUB3 THE VACANCY CONC. INCREASES, WHICH RESULTS IN THE APPEARANCE OF SEMICONDUCTOR PROPERTIES. THE THERMAL COND. OF THE COMPOS. CITED WITHIN THE TEMP. RANGE FROM SIMILAR TO 80-440DEGREE SK WAS INVESTIGATED. THE SAMPLES WERE PREPD. BY BRIQUETTING POWDERS UNDER SIMILAR TO 3000 KG-CM PRIME2 AT 200DEGREE SK, WITH THE SUBSEQUENT ANNEALING IN VACUUM AT 400DEGREE SK FOR 50 HR. THE DATA INDICATE THAT THE LAMBDA SUBTOTAL VALUES DECREASE UPON THE TRANSITION FROM BETA-CRSE TO CR SUB2 SE SUB3 WITH INCREASED CONC. OF THE VACANCIES, BEING PHONON SCATTERING CENTERS. FOR CRSE AND CR SUB7 SE SUB8 THE LAMBDA SUBLATTICE IS ALMOST INDEPENDENT OF THE TEMP.; FOR THE REMAINING COMPOS. THE LAMBDA SUBTOTAL LAMBDA SUBELECTRONIC REMAINS PRACTICALLY CONST. TO SIMILAR TO 300-500DEGREE SK, WHEREUPON IT INCREASES WITH THE TEMP. THIS IS CAUSED BY THE INCREASE IN THE ELECTRONIC COMPONENT OF THERMAL COND. THE INCREASE IN LAMBDA SUBLATTICE FOR CR SUB2 SE SUB3, FEGR SUB2 SE SUB4, VCR SUB2 SE SUB4, AND NICK SUB2 SE SUB4 IN THE INTRINSIC COND. REGION IS ASSOC. WITH THE INCLUSION OF HEAT TRANSFER BY BIPOLAR THERMODIFFUSION.

UNCLASSIFIED

1/3 012 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--THERMAL CONDUCTIVITY OF BINARY AND TERNARY SELENIDES OF TRANSITION  
ELEMENTS -U-  
AUTHOR-(03)-IVANOVA, V.A., ABDINOV, D.SH., ALIYEV, G.M.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 566-8  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY, MATERIALS  
TOPIC TAGS--THERMAL CONDUCTIVITY, SELENIDE, CHROMIUM COMPOUND, TRANSITION  
METAL  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1996/0867 STEP NO--UR/0363/70/006/003/0566/0568  
CIRC ACCESSION NO--AP0118042  
UNCLASSIFIED

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R002065900012-6

3/3 018 UNCLASSIFIED PROCESSING DATE--1900170  
CIRC ACCESSION NO--AP0118004  
ABSTRACT/EXTRACT--FACILITY: INST. FIZ., BAKU, USSR.

UNCLASSIFIED

2/3 018 UNCLASSIFIED PROCESSING DATE--16OCT70  
CIRC ACCESSION NO--AP0119004

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFLUENCE OF THE TEMP. AND THE HOLDING TIME AT TEMP. IN THE FUSED STATE ON THE ELEC. COND. OF CRYST. AND LIQ. SE (WITH VARIOUS AMTS. OF CL, I, AND O PRESENT) WAS INVESTIGATED. THE TEMP. DEPENDENCE OF ELEC. COND. FOR CRYST. AND LIQ. SE SAMPLES CONTG. CL IMPURITY DIFFERS SIGNIFICANTLY FROM THE TEMP. DEPENDENCE OF ELEC. COND. FOR PURE SE. THE ELEC. COND. OF SE CONTG. 0.01PERCENT CL PRESENT IN THE LIQ. STATE VARIES WITH THE TEMP. IN THE VERY SAME WAY AS IT DOES FOR PURE SE, EXCEPT WITH DIFFERENT ACTIVATION ENERGY ( $\Delta E$  APPROXIMATELY EQUAL TO 1.6 VS.  $\Delta E$  APPROXIMATELY EQUAL TO 1.9 EV). THE DECREASE IN THE ELEC. COND. OF SE SAMPLES CONTG. 0.025 AND 0.05PERCENT CL AT 350-550DEGREES IS CAUSED BY THE VOLATILIZATION OF THE IMPURITIES AT THESE TEMPS. THE PATTERN IS THE SAME FOR LIQ. SE CONTG. I IMPURITY (ONLY AT GREATER THAN SIMILAR TO 500DEGREES). THE OTHER PROPOSITIONS DO NOT APPLY, AND THE REASONS WHY THEY DO NOT ARE PRESENTED. UPON THE MELTING OF CRYST. SE THE LONG RANGE ORDER SOMEHOW REMAINS PRESERVED, WHICH IS WHY IMPURITIES IN SE PLAY A SIGNIFICANT ROLE. AS A RESULT OF THIS THE ELEC. COND. OF LIQ. SE CONTG. A LARGE AMT. OF CL PRESENT IS ALWAYS LARGER THAN THE ELEC. COND. OF PURE SE. THE ELEC. COND. OF CRYST. SAMPLES OF SE CONTG. SUCH VOLATILIZING IMPURITIES AS CL, I, O, AND BR AT THE GIVEN TEMP. WILL BE STRONGLY DEPENDENT ON THE TEMP. AT WHICH LIQ. SE WAS PRESENT, AS WELL AS ON THE HOLDING TIME AT THIS TEMP. AND THE FREE VOL. OF THE ANODES. WITH INCREASING TEMP. OF PREPN. OF THE SAMPLES THE ELEC. COND. OF CRYST. SE CONTG. CL, I, AND O IMPURITIES 1ST INSIGNIFICANTLY INCREASES AND THEN DECREASES.

UNCLASSIFIED



1/3 018 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--ELECTRICAL CONDUCTIVITY OF LIQUID AND CRYSTALLINE SELENIUM  
CONTAINING CHLORINE, IODINE, AND OXYGEN IMPURITIES -U-  
AUTHOR-(03)-AKHUNDOVA, E.G., ABDINOV, D.SH., ALIYEV, G.M.  
COUNTRY OF INFO--USSR  
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 5(2), 372-4  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--ELECTRIC CONDUCTIVITY, CHLORINE, IODINE, OXYGEN, SELENIUM,  
BROMINE, CRYSTAL, FLUID STATE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1996/0625 STEP NO--UR/0363/70/006/002/0372/0374  
CIRC ACCESSION NO--AP0118004  
UNCLASSIFIED

USSR

ABDULLAYEV, G. B., et al, Doklady Akademii Nauk SSSR, Vol 194, No 4, 1 Oct 70, pp 798-800

that admixtures which are active in the crystalline state become inactive in the amorphous state. Under deoxygenization of polycrystalline hexagonal selenium the conductance at a given temperature reduces by a factor of 1000; i.e., is approximately 100 times greater than in the case of single crystalline selenium. This is attributed to two factors: (a) in the production of single crystals of selenium the selenium is cleaned of oxygen admixtures; and (b) oxygen atoms in polycrystalline samples, by reducing the intermolecular potential barriers, cause a growth in the mobility of current carriers during the motion of current carriers. The change in the electrical properties of single crystals of selenium under deoxygenization is attributed to the entry of oxygen atoms in the selenium lattice.

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USSR

UDC 537.311.1

ABDULLAYEV, G. B., Academician of the Academy of Sciences Azerbaydzhan SSR, ALIYEV, G. M., MEKHTIYEVA, S. I., MAMEDALIYEVA, G. G., GADZHIYEV, F. B., DZHALILOV, N. Z., and ABDINOV, D. Sh., Institute of Physics of the Academy of Sciences Azerbaydzhn SSR, Baku

"On the Origin of Hole Conduction in Selenium"

Moscow, Doklady Akademii Nauk SSSR, Vol 194, No 4, 1 Oct 70, pp 798-800

Abstract: The type of conductivity of amorphous selenium with different degrees of crystallinity and also of monocrystalline selenium before and after deoxygenization was studied to obtain information on the origin of its hole conduction and to clarify the possibility of producing selenium with electron conduction. It is noted that it has been previously assumed that oxygen atoms in selenium cause its hole conduction by producing acceptor levels but that direct data supporting this assumption is practically null. It is stated that the electrical properties of selenium are not associated with the presence of periodicity in the lattice but are basically determined by the short-range order; this short-range order therefore determines the width of the forbidden zone and consequently the concentration of natural free electrons and holes. Under amorphization of the material there occurs a grouping of atoms around the defects such

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USSR

UDC 678.742.3.01:53

MAMEDOV, R. I., SADYKH-ZADE, S. I., SULTANOV, R. A., ALIYEV, G. D.  
ALI-ZADE, E. M., and FATALIYEV, A. G.

"Modification of Polypropylene With Organsphosphorus Compounds During the Reprocessing"

Moscow, Plasticheskiye Massy, No 6, 1973, pp 61-62

Abstract: Results of the investigation of thermal and optical ageing of a polypropylene sample modified by a diphosphite are described. It was established that addition of the diphosphite to the polypropylene retards the oxidation processes, this material exhibiting better indexes than polypropylene samples modified with synergistic mixtures of 0.3% of topanol KA + 0.5% of dilauryl thiodipropionate and the light stabilizer benzene OA. Addition of the diphosphite to the polypropylene increases considerably its elasticity preserving its starting strength and increasing its frost stability down to -30°C.

ALIYEV, G.A.

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2758  
 Moscow, 22 Nov 70, p. 2  
 of the Azerbaijan SSR, and G. A. Kharapin, professor at the Institute of the National Economy, Leningrad, entitled "The Development of Cartography in the Azerbaijan SSR."  
 The group of scientists who participated in the compilation of the atlas of Azerbaijan SSR were presented certificates of the USSR Geographic Society.  
 The work of the congress will last four days.

Geography Assn

60  
 PRO SOVIET SCIENCE  
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 The Congress and Congress  
 Soviet National Society, 22 Nov 70, p. 2  
 Foundation. The Congress of the Republic's Academic Society, under the patronage of the Azerbaijan Academy of Sciences.  
 Hundreds of members of the society, scientists, teachers of higher and secondary educational institutions, and others are expected to take part.  
 Azerbaijan M. A. Kharapin, secretary of the Azerbaijan Academy of Sciences.  
 Soviet efforts were noted in the development of the Institute of Geography and Cartography of the Republic's Academy of Sciences, entitled "Protecting the National List of Reserves." Prof. G. A. Kharapin, head of the Chair of Geography, and a group of scientists of Azerbaijan State University, entitled "The Problem of the Economic Geography of the Azerbaijan SSR." Doctor of Geographic Sciences M. A. Kharapin, head of the Chair of Physical Geography of Azerbaijan State University, entitled "The Problem of the Physical Geography and the Demography of Azerbaijan."

USSR

UDC 51.155.001.57:681.3.06

KAMILOV, M. M., ALIYEV, E. M., KIM, A. N.

"Calculation of  $\epsilon$ -Thresholds in the Recognition of Objects by a Voting Algorithm"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 45, Tashkent, 1971, pp 72-80, (Translated from Referativnyy Zhurnal, Kibernetika, No 10, 1971, Abstract No 10 V831).

NO ABSTRACT.

USSR

KAMILOV, M. M., ALIYEV, E. M.

"Selection of Length of Voting Sets in Algorithms for Calculation of Estimates"

Vopr. Kibernetiki [Problems of Cybernetics -- Collection of Works], No 44, Tashkent, 1971, pp 162-165, (Translated from Referativnyy Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V746 by V. Mikheyev).

Translation: A method is described for determination of the length of voting sets in algorithms for calculation of estimates in which the length is selected on the basis of the similarity of objects within a class and determination of the mean number of corresponding columns with respect to rows of one and all fixed classes in a table of recognition objects. It is noted that the method suggested can be used for large tables of objects, fixed by characteristics of an arbitrary alphabet.

USSR

UDC: 8.74

KAMILOV, M. M., ALIYEV, E. M.

"Criterion of Operating Effectiveness of a Polling Algorithm and its Evaluation"

V sb. Vopr. kibernetiki (Problems of Cybernetics--collection of works),  
vyp. 45, Tashkent, 1971, pp 126-131 (from RZh-Kibernetika, No 5, May 72,  
Abstract No 5V558)

[No abstract]



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R002065900012-6

3/3 020 UNCLASSIFIED PROCESSING DATE--30OCT70  
CIRC ACCESSION NO--AP0123985  
ABSTRACT/EXTRACT--FACILITY: INSTITUTA EPIDEMIOLOGII I MIKROBIOLOGII IM.  
N. F. GAMALEY AMN SSSR, MOSKVA.

UNCLASSIFIED

2/3 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123985

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE T-T STRAIN OF L. TROPICA MAJOR ISOLATED IN UZBEKISTAN FROM JERBOA WAS USED FOR COMPARATIVE STUDY OF ANTIGENIC PROPERTIES AND VIRULENCE OF LEISHMANIA IN RELATION TO THE DURATION OF THEIR PROPAGATION. THE VIRULENCE OF THE STRAIN WAS STUDIED IN YOUNG GOLDEN HAMSTERS. INOCULATION WAS MADE WITH SUBSTRAINS T-T SUBO FRESHLY ISOLATED FROM HAMSTERS, AS WELL AS WITH THE INITIAL T-T STRAIN CULTIVATED FOR A LONG PERIOD IN VITRO. ADLER'S METHOD MODIFIED BY SAFIYANOVA WAS USED FOR SEROLOGICAL STUDIES OF ANTIGENIC PROPERTIES OF T-T STRAIN. IT WAS SHOWN THAT IN VITRO PROPAGATION OF THE STRAIN RESULTED IN A GRADUAL REDUCTION OF ITS VIRULENCE LEADING TO PROLONGATION OF THE INCUBATION PERIOD OF THE DISEASE AND MODIFICATION OF THE SEVERITY OF THE PATHOLOGICAL PROCESS IN GOLDEN HAMSTERS. THE RESULTS OF SEROLOGICAL STUDIES SHOWED THE TITER OF ANTISERUM TO BE INDEPENDENT OF WHETHER IT WAS PREPARED AGAINST A SUBSTRAIN, FRESHLY ISOLATED FROM HAMSTERS OR AGAINST THAT PROPOGATED IN VITRO FOR A LONG TIME. IT WAS ALSO ESTABLISHED THAT THE DIFFERENCE IN TITERS OBTAINED IN EXPERIMENTS WITH ANTISERA PREPARED AGAINST SUBSTRAINS WITH DIFFERENT DURATION OF IN VITRO PROPAGATION AND TESTED WITH THE SAME ANTIGEN WAS WITHIN LIMITS OF VARIATIONS OF TITERS OF ANTISERA PREPARED IN DIFFERENT RABBITS AGAINST THE SAME ANTIGEN. THIS DIFFERENCE WAS NOT STATISTICALLY SIGNIFICANT. THESE EXPERIMENTS INDICATE THAT ANTIGENIC PROPERTIES OF LEISHMANIA DO NOT DIRECTLY DEPEND UPON DURATION OF THEIR MAINTENANCE IN VITRO. THESE PROPERTIES ARE MORE STABLE THAN VIRULENCE OF THE STRAIN.

UNCLASSIFIED

1/3 020 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--COMPARATIVE STUDY OF ANTIGENIC PROPERTIES AND VIRULENCE OF  
LEISHMANIA IN RELATION TO TIME OF MAINTAINAME IN VITRO -U-  
AUTHOR--ALIYEV, E.I.  
COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL  
39, NR 3, PP 293-298  
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANTIGEN, VIRULENCE, LEISHMANIA, SEROLOGIC TEST

CONTRCL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--2000/0220

STEP NO--UR/0358/70/039/003/0293/0298

CIRC ACCESSION NO--AP0123985

UNCLASSIFIED

UDC 616.993.162-097.5

USSR

GASAN-ZADE, G. B., ALIYEV, E. I., and SAF'YANOVA, V. M., Scientific Research Institute of Medical Parasitology and Tropical Medicine imeni S. M. Kirov, Ministry of Health, Azerbaydzhan SSR, and All-Union Scientific Research Institute of Epidemiology and Microbiology imeni N. F. Gamaleya, Academy of Sciences USSR

"Detection of Specific Antibodies in Persons Convalescing From Cutaneous Leishmaniasis in Endemic Foci of Azerbaydzhan"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, No 5, 1971, pp 543-547

Abstract: Adler's phenomenon, as quantitated by Saf'yanova, was used as a serological test to detect specific antibodies to cutaneous leishmaniasis in 51 Azerbaydzhanis with a history of the disease. (Adler's phenomenon -- the presence of homologous antibodies -- markedly changes the growth of Leishmania cultures on nutrient media containing immune rabbit sera). Adler's method revealed the presence of group-specific antibodies to Leishmania of mammals. However, like other serological tests, it was not species-specific, for the results were virtually the same when cultures of different Leishmania species (*L. tropica* minor, *L. tropica* major, and *L. donovani*) were used as antigens.

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Acc. Nr: **AP0038119**

Ref. Code: UR 0326

PRIMARY SOURCE: Fiziologiya Rasteniy, 1970, Vol 17, Nr 1,  
pp 182 - 188

NUTRIENT SOLUTIONS FOR GROWTH OF SEEDLINGS IN CULTURES  
WITHOUT SOIL

E. A. ALIEV

«Pushcha-Voditsa», Agrochemical Laboratory, Kiev

The concentrations and relative amounts of elements in nutrient solutions for hydroponic cultures are studied. It is found that nutrient solutions for seedlings must have a relatively lower concentration than solutions employed for growth of mature plants. On a moderate nitrogen-potassium background the solutions should have large amounts of phosphorus and calcium, the total salt concentration being 1.4—1.8 g/l. The optimal nutrient medium for cucumber seedlings contained the following amounts of salts (in g/l): N — 120; P<sub>2</sub>O<sub>5</sub> — 149; K<sub>2</sub>O — 198; CaO — 182 and MgO — 49.8. For tomatoes the content was N — 120; P<sub>2</sub>O<sub>5</sub> — 170; K<sub>2</sub>O — 198; CaO — 234; MgO — 49.8.

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2/2 009 UNCLASSIFIED PROCESSING DATE--3000170  
CIRC ACCESSION NO--AP0115560  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLY. DIAGRAM OF CUP SUB2 IN-H  
SUB2 0 IS CONSTRUCTED AND SOLY. DATA AT 0, 10, AND 25DEGREES ARE  
TABULATED.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--3000170  
TITLE--COPPER(II) FLUORIDE HYDROFLUORIC ACID WATER SYSTEM AT 0, 10, AND  
25DEGREES -U-  
AUTHOR--ALIYEV, D.  
COUNTRY OF INFO--USSR  
SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 889-90  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--SOLUBILITY, AQUEOUS SOLUTION, COPPER COMPOUND, FLUORIDE,  
HYDROGEN FLUORIDE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1994/1731 STEP NO--UR/0076/00/015/003/006/0/000  
CIRC ACCESSION NO--AP0115560  
UNCLASSIFIED



2/2 023

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0101740

ABSTRACT/EXTRACT--(H) GP-0- ABSTRACT. IMMEDIATE RESULTS FOLLOWING TREATMENT WITH GAMMA RAYS OF MALIGNANT TUMOURS OF DIFFERENT LOCALIZATION IN 105 PATIENTS TO WHOM COMMON METHODS OF BEAM THERAPY WERE PRACTICALLY CONTRAINDICATED ARE REPORTED. IRRADIATION OF THE PATIENTS WAS DONE FROM ONE FIXED FIELD WITHOUT SHIFTING THE RUCKY POTTER DIAPHRAGM THROUGH OUT THE WHOLE OF THE TREATMENT COURSE. SINGLE FOCAL DOSES IN THE CENTRE OF THE ORIFICE WERE 300-600 R AND SUMMARY ONES 8000-12000 R. IN THE SHIELDED AREAS OF THE TUMOUR THE DOSE AT THE END OF THE GAMMA THERAPY COMMONLY AMOUNTED TO 1500-3000 R. AN ANALYSIS OF THE FINAL RESULTS REVEALED AN OBJECTIVE CLINICAL EFFECT IN TERMS OF DIMINUTION AND DISAPPEARANCE OF THE NEWGROWTH IN 72PERCENT OF THE PATIENTS.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--11SEP70  
TITLE--NON UNIFORM IRRADIATION OF MALIGNANT TUMOURS IN REMOTE GAMMA  
THERAPY -U-  
AUTHOR--ALIYEV, B.M.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 3, PP 8-15

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MEDICAL NUCLEAR APPLICATION, GAMMA IRRADIATION, TUMOR,  
RADIATION BIOLOGIC EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1985/1685

STEP NO--UR/0241/70/015/003/0008/0015

CIRC ACCESSION NO--AP0101740

UNCLASSIFIED

USSR

ALIYEV, B., Tr. 2-y Vses. konf. po chisl. metodam resheniya zadach teorii uprugosti i plastichnosti, 1971, Novosibirsk, 1971, pp 6-12

selection of the regularization parameter as a function of the step of the grid and the error in calculation of the right sides of the variational-difference equations is discussed. These calculations are effective if the radius of the sphere in  $W_2^2(R)$  to which the solution of the problem belongs is known. The notation and many assumptions made in previous works of the author are used in the paper. 7 ref. V. F. Terent'yev.

2/2

USSR

UDC 539.3

ALIYEV, B.

"Stable Difference Method for Solving the Second Boundary Value Problem of Elasticity Theory"

Tr. 2-y Vses. konf. po chisl. metodam resheniya zadach teorii umnogostni i plastichnosti, 1971 (Works of the Second All-Union Conference on Numerical Methods for Solving Problems of Elasticity and Plasticity Theory, 1971), Novosibirsk, 1971, pp 6-12 (from RZh-Mekhanika, No 8, Aug 72, Abstract No 8V18)

Translation: A method is proposed for constructing a unique, so-called normal solution (subject to certain linear integral relationships) to the second boundary value problem of elasticity theory in displacement for an arbitrary plane of a region  $R$  with a sufficiently smooth boundary. The problem here is to find the appropriate difference solution by applying the variational-difference scheme of Friedrichs and Keller that they obtained in 1966 for the generalized Neumann problem. The method is based on using one particular scheme of the regularization method of A. N. Tikhonov which is useful in solving the equations with a symmetric operator of fixed sign. A method approving the convergence of the method is presented and its error is evaluated. The problem of the agreement of the

2/2 015 UNCLASSIFIED PROCESSING DATE--27NOV70  
CIRC ACCESSION NO--AA0135231  
ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE TITLE ANTISEPTIC, HAVING  
INCREASED PROTECTIVE PROPERTIES, HAS THE FOLLOWING COMPN. (IN  
WT.PERCENT). PENTACHLOROPHENOL 3-5, GREEN OIL 14-22, AND LIGHT  
PETROLEUM PRODUCTS (E.G. WHITE ALC., LIGOINE KEROSENE FRACTIONS  
ACCORDING TO THE ALL UNION STATE STANDARD 10227-62, OR LIGROINE) 73-83.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--27NOV70  
TITLE--ANTISEPTIC FOR RAPID SATURATION OF WOOD -U--  
AUTHOR--(03)-GORSHIN, S.N., KRAPIVINA, I.G., ALIYEV, A.M.  
COUNTRY OF INFO--USSR  
SOURCE--USSR 263,851  
REFERENCE--OTKRYTYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,  
DATE PUBLISHED--1CFEB70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--CHEMICAL PATENT, FUNGICIDE, CHLORINATED ORGANIC COMPOUND,  
PHENOL, WOOD  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3006/1590 STEP NO--UR/0482/70/000/000/0000/0000  
CIRC ACCESSION NO--AA0135231  
UNCLASSIFIED

3/3 021

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0113482

ABSTRACT/EXTRACT--THE LATTER WAS DUE TO HIALURONIC ACID (II) AND  
CHONDROITINSULFURIC ACIDS (III). MOTHER LIQUORS AFTER THE 2ND, 3RD, AND  
4TH PPTN. WITH ETOH GAVE A BLUE SPOT OF R SUBF 0.80 DUE TO BETA 1, AND  
THAT AFTER THE 5TH PPTN. GAVE AN ADDNL. SPOT OF R SUBF 0.98.  
FACILITY: AZERB. MED. INST. IM. NARIMANOVA, BAKU, USSR.

UNCLASSIFIED

2/3 . 021

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0113482

ABSTRACT/EXTRACT--(U) GP-U- ABSTRACT. HEPARIN (I) WAS MANUFD.

INDUSTRIALLY FROM ANIMAL LUNGS USING THE FOLLOWING OPERATIONS: (1) EXTN. OF LUNGS AT PH 9.0-9.5; (2) ACIDIC PPTN. AT PH 2.5 AND EXTN. OF THE PPT. WITH 15PERCENT NACL AT PH 9.0-9.5; (3) 1ST PPTN. WITH ETOH; (4) PROTEINOLYSIS OF A I PROTEIN COMPLEX WITH PANCREATIN; (5) 2ND PPTN. WITH ETOH; (6) 3RD, 4TH, AND 5TH PPTN. WITH ETOH; (7) WASHING I WITH ETOH AND ET SUB2 O. SOLNS. AT EACH STAGE WERE EXAMD. BY ASCENDING PAPER CHROMATOG. ON BYSTRAYA BRAND PAPER IN THE MEUH-H SUB2 O (1:1) SYSTEM OF PH 8.0, FOR 14-16 HR. CHROMATOGRAMS WERE DRIED, IMMERSED IN A FORMALIN ETOH (1:9) MIXT. FOR 4-5 MIN, DRIED AGAIN, AND DEVELOPED WITH 0.02PERCENT AQ. ACETONE TOLUIDINE BLUE SOLN. AN EXCESS OF THE DYE WAS WASHED WITH 3-5PERCENT ACOH AND H SUB2 O. UNDER THESE CONDITIONS, I GAVE PINK VIOLET OR RED PINK SPOTS ON A LIGHT BLUE BACKGROUDN, AND ACCOMPANYING COMPS. GAVE BLUE SPOTS. AT THE 1ST STAGE NO I WAS DETECTED, POSSIBLY DUE TO THE PRESENCE OF A STABLE I PROTEIN COMPLEX WHICH WAS DECOMPD. AT FURTHER STAGES AT PH 9.0-9.5. ON CHROMATOGRAMS OF THE EXTNS. FROM THE 2ND STAGE, AN OBLONG BLUE SPOT WAS DETECTED NEAR THE STARTING LINE. PPTS. FROM THE 3RD STAGE WERE DRIED AT 60-70DEGREES AND DISSOLVED TO GIVE 1PERCENT SOLN. THIS GAVE A SIMILAR OBLONG SPOT AND 2 VIOLET SPOTS (R SUBF 0.84 AND 0.98). SOLNS. FROM THE 4TH STAGE GAVE THE SAME 2 SPOTS AND A BLUE ONE OF R SUBF 0.73. THE SAME PATTERN WAS OBTAINED WHEN PPTS. FROM THE 2ND, 3RD, AND 4TH PPTN. WERE CHROMATOGRAPHED. THE POWD. I OF ACTIVITY 102 IU-MG GAVE 2 VIOLET SPOTS OF R SUBF 0.82 AND 0.98.

UNCLASSIFIED



1/3 . 021 UNCLASSIFIED PROCESSING DATE--09OCT70  
TITLE--STAGE WISE CONTROL OF HEPARIN PRODUCTION USING PAPER CHROMATOGRAPHY  
-U-  
AUTHOR-(02)-ALIYEV, A.M., ALEKPEROV, A.F.

COUNTRY OF INFO--USSR

SOURCE--KHIM. FARM. ZH. 1970, 4(2), 48-50

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HEPARIN, DRUG PRODUCTION, PROCESSED ANIMAL PRODUCT, LUNG,  
CHEMICAL PURIFICATION, CHROMATOGRAPHIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0593

STEP NO--UR/0450/70/004/002/0048/0050

CIRC ACCESSION NO--AP0113482

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133806

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFICIENCY OF THE DISTN. COLUMNS WAS IMPROVED BY APPLYING INTERMEDIATE CIRCULATING REFLUX ON 2 CROSS SECTIONS. THE CAPACITY OF THE PLANT WAS INCREASED BY INCREASING THE TOTAL HEAT EXCHANGING SURFACE TO LARGER THAN OR EQUAL TO 18.6 M PRIME2-TON FEED. THE EFFICIENCY OF THE HEAT EXCHANGERS WAS INCREASED WHEN THE VELOCITY OF PETROLEUM FEED WAS INCREASED TO 1.59 M-SEC. FACILITY: BAKIN. NEFTEPERERAB. ZAVOD, BAKU, USSR.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--EXPERIMENTAL REDESIGN OF APPARATUS FOR THE ATMOSPHERIC DISTILLATION  
OF PETROLEUM -U-  
AUTHOR-(05)-FARAMAZOV, S.A., ALIYEV, A.A., AKHMEDOV, N.I., KOSENKOV, V.G.,  
DAVIDYAN, L.K. A  
COUNTRY OF INFO--USSR  
SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (4), 10-12  
DATE PUBLISHED-----70  
SUBJECT AREAS--MATERIALS, MILITARY SCIENCES  
TOPIC TAGS--PETROLEUM DISTILLATION, PETROLEUM REFINING EQUIPMENT, HEAT  
EXCHANGER  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3005/1962 STEP NO--UR/0318/70/000/004/0010/0012  
CIRC ACCESSION NO--AP0133806  
UNCLASSIFIED

1/2

USSR

ARIFOV, U. A., and ALIYEV, A. A., *Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya*, Vol 35, No 2, Feb 71, pp 384-388

However, some facts such as smoothing of space distribution anisotropy with increase of target temperature, the dependence of the fine structure of the space distribution on different collision parameters (energy  $E_0$ , angle of incidence of primary ions, and angle of emission and scattering of secondary ions), the existence of areas with qualitative transitions from one dependence on  $E_0$  and  $\phi$  of primary ions and target temperature  $T$  to another for  $R$  (where  $R = \frac{I_2}{I_1}$ ) have no explanation within the limits of currently existing scattering theories.

2/2

USSR

UDC 537.534

ARIPOV, U. A., and ALIYEV, A. A.

"Space and Energy Distribution of Ions Scattered by a Single Crystal"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 2, Feb 71, pp 384-388

**Abstract:** The authors studied changes in the character of the space and energy distribution of  $Rb^+$  ions scattered by tungsten or molybdenum single crystals in relation to target orientation and temperature in the primary ion energy region  $E_0 = 0.5-5$  kev. The most interesting finding of the study was the dependence of the depth of the secondary minimum on the initial energy  $E_0$ . The relative depth of the minimum was found to increase with increased  $E_0$ . The results of the study show that the principal effects observed such as anisotropy of the space distribution, the character of the behavior of energy loss by ions according to scattering along different crystallographic directions, displacement of peaks in the energy spectrum of ions scattered by chain with increased target temperature, variations in space distribution anisotropy with an increase in the angle of incidence  $\phi$  of primary ions and angle of emission  $\theta$  of secondary ions, etc. permit a qualitative explanation on the basis of theoretical models of scattering by isolated series of atoms.

USSR

ARIFOV, U. A., et al., Radiotekhnika i elektronika, Vol XVI, No 2, 1972, pp 359-365

of ions with crystals to determine the annealing temperature of radiation defects in crystals.

USSR

UDC 548.55.001.5

ARIFOV, U. A., ALIYEV, A. A., TUFMASHEV, E.

"Effect of Radiation Disturbances of a Crystal Lattice Created by Ion Bombardment on the Angular and Energy Distribution of the Scattered Ions"

Moscow, Radiotekhnika i elektronika, Vol XVI, No 2, 1972, pp 359-365

Abstract: A study was made of the variation of the angular and energy distributions of secondary ions during ion bombardment of the [111] face of single crystals of silicon and germanium by  $\text{Na}^+$  ions in the energy range of  $E_0 < 5$

kiloelectron volts. The effects caused by the ordered arrangement of the atoms of the crystal lattice are observed at temperatures exceeding the annealing temperature of the radiation defects introduced by the ion irradiation.

Positive ion bombardment of the face of Si and Ge single crystals by  $\text{Na}^+$  ions in the given range gradually leads to the formation of amorphous layers on the surface, and the structured nature of the energy spectrum and anisotropy of the angular distribution of the scattered ions disappear correspondingly. Multiple manipulations by heat treatment lead to the formation of oxide layers on the target surface. Further heating of it does not always lead to restoration of the surface structure of the crystal. The possibility is indicated of using the orientation relations of the phenomena occurring during interaction

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USSR

SHTEYNMAN, B. S., ALIYEV, A. A., Tr. Vses. konf. Molodykh uchenykh gidromet-sluzhby SSSR. Okeanol. raschety i prognozy, Leningrad, Gidrometeoizdat, 1972, pp 73-76

bottom. The rate of mass suspension for fractions less than 0.2 mm rises in proportion to the square root of the period of the wave. If the channel and wave flows are in different directions the rate of mass suspension for fractions less than 0.1 mm considerably increases. Authors abstract.

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USSR

UDC 532.595.2

SHTEYNMAN, B. S., ALIYEV, A. A.

"Some Results of Experimental Studies of the Displacement of Deposits at the Mouth of a River (The Samur)"

Tr. Vses. konf. Molodykh uchenykh gidrometsluzhby SSSR. Okeanol. raschety i prognozy (Works of the All-Union Conference of Young Scientists of the Hydro-meteorological Service of the USSR. Oceanological Calculations and Forecasts), Leningrad, Gidrometeoizdat, 1972, pp 73-76 (from RZh-Mekhanika, No 6, Jun 72, Abstract No 6B630)

Translation: Processes for the suspension of deposits under conditions of channel and wave flows at the mouth bar of the Samura River were investigated experimentally. Tagged sands of various fractions were used. It was found that in channel flow with a plane bottom the rate of mass suspension of deposits for fractions 1.0-0.05 mm exceeds the separation rate by a factor of 1.2. If bottom ridges are present the erosion capacity of the flow considerably rises with an increase in the height of the latter. If there is purely a wave flow, the suspension of fractions greater than 0.2 mm occurs approximately under the same average velocity as in channel flow for a plane

1/2

USSR

UDC 669.71.48

BRUSAKOV, YU. I., SIROTKIN, N. N., RZHAVIN, S. A., AVDEYEV, M. P., ALIVOVODICH,  
M. KH., KUCHENENKO, A. G.

"Processing Metal-Containing Slags in the Production of Silicon Aluminate  
Alloys"

Tr. Vses. n.-i. i proyekt. in-ta alumin., magn. i elektrokh. prom-sti  
(Works of the All-Union Scientific Research and Planning and Design Institute  
of Aluminum, Magnesium and Electrode Industry), 1970, No 71, pp 177-183 (from  
RZh-Metallurgiya, No 4, Apr 71, Abstract No 46197)

Translation: Test results with respect to ore recovery processing of metal  
slags formed when obtaining and defining aluminum alloys with silicon are  
discussed. The technical possibility and expediency of recovery of crushed  
slags in the indicated alloy production process are confirmed. The specific  
consumption indexes of the alloys in large 120 and 16,500 kilowatt-ampere  
laboratory and industrial furnaces are presented. The extraction of alloy  
from the slags exceeded the content of metal phase in them. This indicates  
additional extraction of metal from the carbides and oxides contained in the  
slags in the amount of up to 33% in a large laboratory furnace and 27% in an  
industrial furnaces. There are 5 tables.

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USSR

UDC 591.1.15

ALIVERDIYEV, A. A., and BUKAROV, P. G.

"Investigation of the Effect of Ultraviolet Irradiation on Certain Water-Soluble Brain Proteins"

Sb. nauch. soobshch. Dagestan. un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 48-49 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1330)

Translation: The authors studied the effect of UV-irradiation on the content of amide groups in the third fraction of brain protein in rats. It is shown that the content of amide groups decreases after the first exposure, and increases after the fifth exposure. The maximum content of amide groups is observed after the tenth session of UV-irradiation. An intensive reduction in the content of amide groups is observed after the fifteenth session. All irradiated animals showed a change in the ratio between readily hydrolyzable amide groups and those which hydrolyze with greater difficulty, which in the author's opinion indicates a change of protein metabolism in the brain of the exposed animals.

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USSR

UDC 591.1.15

ALIVERDIYEV, A. A., and BUKAROV, N. G.

"Effect of UV-Irradiation on the Degree of Amide Conversion of Water-Soluble Brain Proteins"

Sb. nauch. soobshch. Dagestan. un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 184-185 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1335)

Translation: The authors investigated the effect of UV radiation on the degree of amide conversion of water-soluble proteins of the fourth brain fraction in rats. It is shown that after the first and fifth sessions of exposure, an increase is observed in the amount of unstably bound amide groups, but the sum of all amide groups remains unchanged. After the tenth and fifteenth sessions, there is a reduction in the amount of both unstably bound and strongly bound amide groups. The authors examine the changes in the degree of amide conversion of brain proteins after UV exposure resulting from changes in the functional activity of the central nervous system.

USSR

UDC 591.1.15

ALIVERDIYEV, A. A., BUKAROV, N. G., and GOSTISHCHEVA, L. V.

"Change of the Content of Amide Groups of Water-Soluble Brain Proteins Under the Effect of UV-Radiation"

Sb. nauch. soobshch. Dagestan. un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 173-180 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1333)

Translation: In experiments on rats, the authors studied the effect of UV-radiation on the content of amide groups in water-soluble and water-insoluble brain protein fractions. It is shown that in water-soluble proteins appreciable changes (relative to the control) set in after the fifth session of exposure, reaching a maximum by the tenth session. A change is noted in the ratio between unstably bound and strongly bound amide groups. After the fifth session, the water-soluble proteins showed a reduction in the content of both the unstably bound and the strongly bound groups. After the tenth session, an increase is observed in the content of unstably bound amide groups.

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USSR

UDC 591.1.15

ALIVERDIYEV, A. A., and BUKAROV, N. G.

"Certain Aspects of the Protein Metabolism of Rat Brain Under Ultraviolet Exposure"

Sb. nauch. soobshch. Dagestan. un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 181-183 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1334)

Translation: In experiments on rats, the authors studied the effect of UV-irradiation on the content of amide groups of the second fraction obtained by fractionating water-soluble proteins of the brain by a modified [Kohn] method. It is shown that within 24 hours after the first session the content of unstably bound amide groups increases by 15.7%, while the quantity of strongly bound amide groups decreases by 52.6%. After the fifth session, the quantity of strongly bound amide groups increases by 27%, while the quantity of unstably bound groups is the same as the control. After the tenth session, the content of unstably bound groups decreases by 25.6%, while the content of strongly bound groups increases by 33.1%. After the fifteenth session, the quantity of unstably bound groups had increased by 13.9%, while the quantity of strongly bound groups had decreased by 22.4%.

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USSR

UDC 591.1.15

ALIVERDIYEV, A. A., and BUKAROV, N. G.

"Effect of UV-Radiation on Certain Brain Proteins"

Sb. nauch. soobshch. Dagestan un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 165-170 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1332)

Translation: In experiments on rats, the authors studied the effect of ultra-violet radiation on the content of amide groups in the first fraction of brain proteins isolated by the [Kohn] method as modified for brain tissue. It is shown that after the first and fifth sessions of exposure the quantity of amide groups increases. After the tenth exposure the overall quantity and the quantity of strongly bound amide groups increase, while the quantity of unstably bound amide groups decreases. After 15 sessions, a noticeable reduction in the quantity of amide groups is observed.

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JE

KOVTONYI, T. F., et al., Fizika i Tekhnika Poluprovodnikov, Vol 6, No 3, 1972, pp 575-576

reaches a constant value (segment II). The length of segment I is less the greater the voltage pulse amplitude. The magnitude of the saturation current in segment I approaches saturation with an increase in voltage. Under the effect of a light pulse, a photoconductivity signal is observed in segment II. Current oscillations and the length of segment I and magnitude of the current of segment II as functions of the voltage pulse amplitude are presented.

Structures were manufactured so that the dielectric resistance was commensurate with the semiconductor resistance, and it was discovered that the sensitivity of such structures is no lower than in good metal-dielectric-semiconductor electric-metal structures operating in the pulse accumulation mode. The data indicate that the prebreakdown operating mode of the investigated structures can be used in creating dynamic storage elements and also certain types of photoreceivers.



USSR

UDC 621.382.2

ROVONTEV, A. P., KADIN, V. A., KADIN, V. G., DMITRIYEV, P. A., ALISULTANOV, YU. B., 1972, No. 3.

"Storage of Charge Carriers in Metal-Dielectric-Semiconductor-Dielectric-Metal Structures in the Prebreakdown Mode"

Leningrad, Institute of High Polymers, Vol 6, No 3, 1972, pp 575-576

Abstract: The authors describe the phenomenon of accumulation of free carriers in the context of pulse and stationary illumination in metal-dielectric-semiconductor-dielectric-metal structures in which there were no continuous current in the dielectric layer [A. P. Levitovskiy, et al., *ITP*, 16, No. 2, 1971]. Attention is paid to the case where significant decay of carriers takes place in the dielectric layer and accumulation of carriers is observed in practice. Storage of the short light pulse action is observed in the case of structures with a large size of illumination of the metal-dielectric-semiconductor junction. In the case of illumination of the metal-dielectric-semiconductor junction, a negative current pulse is observed on the leading edge of the pulse. This is characteristic of structures without leakage of carriers from the semiconductor. When the continuous current has a comparatively small value, only after this is a significant increase in the continuous current, the time delay is observed. After some time, it

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USSR

CHERNYY, YU. F., et al., Kuznechno-Shtampovoye Proizvodstvo, No 8, Aug 71, pp 11-12

Donetskaya Oblast plants. A model P479 hydraulic press is used for billet deformation. The hydropressing setup consists of a high-pressure multilayer container, rod and die with gasketing, an upper and lower plate, and a centerer and fastener. The tool billet hydropressing process provides for the preparation of initial billets, straining of the billets, and their subsequent treatment. Kh12M steel (HRC 57-59) is used for the die. The economic advisability of using the technique of high-speed steel hydropressing for the fabrication of tool billets is based mainly on the increased tool durability as a result of the improved structure and physicomechanical properties of the steel after deformation. There is a saving in high-speed steels because the billet comes as close as possible to the tool size.

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USSR

UDC 621.735.043.016.3:669.14.018.252.3

CHERNYY, YU. F., ALISTRATOV, L. I., BEREZIN, A. A., GALKIN, A. A., KOVIKO, V. S., KULIKOV, N. I., SPUSKANYUK, V. Z., and SHTOKMAN, A. D.

"Industrial Introduction of Technique of Hydropressing of Tool Billets From Steels R18, R12, R9"

Moscow, Kuznechno-Shtampovoychnoye Proizvodstvo, No 8, Aug 71, pp 11-12

Abstract: Experimental investigations at Dnepropetrovsk Physicotechnical Scientific Research Institute, Academy of Sciences Ukrainian SSR, showed that the cold plastic deformation of billets of high-speed steels R18, R12, and R9 by the hydropressing method results in significant refinement and more uniform distribution of the carbide phase. Investigations of R18 steel billets following hydropressing, annealing, and heat finishing showed an increase in the mechanical properties and thermostability of the steel, while production tests of 10-mm-diameter reamers showed a 60-70 percent increase in tool durability. Hydropressing of cylindrical round-section billets from R18, R12, and R9 bars up to 30 mm in diameter has been introduced at one of the

2/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70  
CIRC ACCESSION NO--AT0124381  
ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. REVERSE GAS CHROMATOG. (T. C.  
DAVIS, ET AL., 1966) WAS USED TO DET. THE MOL. WT. (M) OF POLY(ETHYLENE  
MALEATE ADIPATE) (I). I WAS DEPOSITED ON NaCl AND USED AS THE  
STATIONARY PHASE IN THE GAS CHROMATOG. OF EtOH, PROH, AND C SUB6 H SUB6  
MIXTS. THE RELATIVE RETENTION TIMES OF THESE ALCS. ARE LINEARLY  
PROPORTIONAL TO M PRIME NEGATIVE 1 OF I. THE METHOD REQUIRES THE USE OF  
I OF KNOWN MOL. WT. FOR CALIBRATION. THIS METHOD IS ALSO SUGGESTED FOR  
USE IN KINETIC STUDIES OF POLYMERS WITH REACTIVE GROUPS WHICH UNDERGO  
CHEM. CHANGES AND HAVE AFFINITY FOR VOLATILE COMPS. FACILITY:  
INST. NEFTEKHIM. SIN. IM. TOPCHIEVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--300CT70  
TITLE--EFFECT OF THE MOLECULAR WEIGHT OF POLYMERIC STATIONARY LIQUID  
PHASES WITH THERMINAL FUNCTIONAL GROUPS ON THE RELATIVE RETENTION TIME  
AUTHOR--(03)--ALISHOYEV, V.R., BEREZKIN, V.G., MIRZABAYEV, G.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(6), 1365-7 (PHYS CHEM)

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--MOLECULAR WEIGHT, GAS CHROMATOGRAPHY, POLYETHYLENE, MALEIC  
ACID, ADIPIC ACID, CARBOXYLIC ACID ESTER, POLYMER, ETHANOL, PROPANOL,  
BENZENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--2000/0711

STEP NO--UR/0020/70/190/006/1365/1367

CIRC ACCESSION NO--AT0124381

UNCLASSIFIED

USSR

STAKHOV, A. P., et al., Pribery i Sistemy Avtomatiki. (Rev. Revised. Nauchno-tekhn. SB., No 9, 1969, pp 35-40 (from Referativnyi Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 5, 1970, Abstract No 5 B59)

tion and correction circuit allows the reliability of the ADI to be increased significantly and makes it possible to construct ADI with digital balance for the measurement of changing input quantities. Five illustrations; 8 biblio. refs.

USSR

UDC 681.3.001.019.3

STAKHOV, A. P., ALIPOV, N. V.

"A Method of Introducing Redundancy in Analog-Digital Converters"

Pribory i Sistemy Avtomatiki. Resp. Mezhd. Nauchno-tekhn. So.  
(Automation Instruments and Systems. Republic Interdepartmental  
Scientific-Technical Collection) No 9, 1969, pp 31-40 (from Nauchno-  
tivistnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika,  
No 5, 1970, Abstract No 5 B59, by O. R.)

Translation: A method is described for introducing structural red-  
dundancy in analog-digital converters (ADC) for the detection and  
correction of errors resulting from dynamic processes and noise at  
the input of the ADC. The essence of the method for introducing  
structural redundancy in ADC is the construction of a functioning  
algorithm for the ADC control device which takes into account the  
result of comparison of the conversion of a priori information on  
the ideal process of the analog-digital converter with instantaneous  
information on the actual process of conversion. The structure of  
a converter is analyzed as it realizes an algorithm for digit-by-  
digit coding. It is noted that the introduction of an error detec-  
1/2

RND / 18766 / 18766  
 Dec 1976

Alinovsky, R. I., A. T. Alinovsky, and  
 N. A. Koshlov. Heating and plasma ions  
component by a collisionless shock wave  
 ZhETF, v. 62, no. 6, 1972, 201-212.

The energy spectra of plasma ions heated by a collisionless shock wave are obtained by passive corpuscular diagnosis. When an aperiodic shock front with relative dissipation is formed in the plasma, ion heating appears as a small group of ions (about 10%) with a mean energy of the order of the electron temperature; the remaining ions are cold. Experimental results agree with a theoretical model, in which the origin of this group of particles is explained by the linear Landau damping of ion-acoustic vibrations in resonance ions located in the "tail" of the distribution function, induced in the shock front.

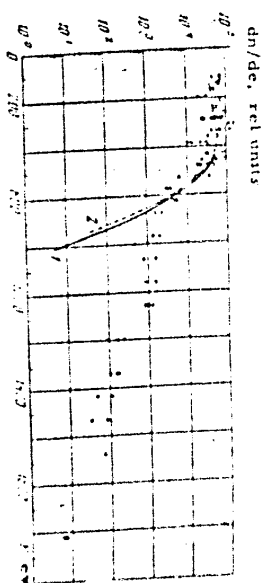


FIG. 1. Typical ion energy spectrum for low Mach number,  $M < M_1$ . Parameters:  $M = 1.8$ ,  $n = 2$ ,  $n = 1.4 \times 10^{13} \text{ cm}^{-3}$ ,  $H_0 = 520 \text{ oe}$ . 1. Calculated approximation for constant ion velocity,  $T_i = 6 \text{ eV}$ ,  $E_{H \text{ max}} = 4.08 \text{ eV}$ . 2. Calculated approximation for increasing ion velocity,  $T_i = 7.5 \text{ eV}$ ,  $E_{H \text{ max}} = 480 \text{ eV}$ .

ALINOVSKIY, R. I.



2/2 009

UNCLASSIFIED

PROCESSING DATE--040670

CIRC ACCESSION NO--AP0139059

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROTEIN SYNTHESIZING CAPACITY AND THE ELECTRON MICROSCOPIC APPEARANCE OF DIFFERENT RIBOSOME FRACTIONS WERE STUDIED. RIBOSOMES FROM CHLOROPLASTS OF PEA SEEDLINGS WERE DISASSOC'D. STEPWISE FROM LAMELLAR STRUCTURES, PROTEINS, AND LIPOPROTEINS BY CONTROLLED TREATMENT WITH NA DEOXYCHOLATE AND FROM CONNECTED NUCLEIC ACIDS BY TREATMENT WITH DNASE, TRITON X-100, AND NA DODECYL SULFATE. THE DIFFERENT RIBOSOME PREPNS. THUS OBTAINED WERE SEPD. INTO COMPONENTS BY CENTRIFUGATION IN A SUCROSE GRADIENT. AS EVIDENCED BY ELECTRON MICROSCOPY, THE EFFECT OF DETERGENTS WAS TO SOLUBILIZE FIRST THE THYLAKOID BINDING LIPOPROTEINS, AND THEN THE LIPOPROTEINS LOCATED INSIDE THE INDIVIDUAL THYLAKOIDS. FURTHER REMOVAL OF LIPOPROTEINS AND PROTEINS FROM THESE STRUCTURES LED TO THE LIBERATION OF CYCLIC POLYRIBOSOMES, WHICH WERE STILL CONNECTED TO DNA MOLS. IT IS SUGGESTED THAT EACH SEGMENT OF DNA IS COUPLED WITH CYCLIC POLYRIBOSOMES AND EMBEDDED IN A THYLAKOID.

FACILITY: A. N. BAKH INST. BIOCHEM., MOSCOW, USSR.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--STRUCTURAL ORGANIZATION OF THE PROTEIN SYNTHESIZING SYSTEM OF  
CHLOROPLASTS -U-  
AUTHOR-(04)-FILIPPOVICH, I.I., TONGUR, A.M., ALINA, B.A., OPARIN, A.I.  
COUNTRY OF INFO--USSR  
SOURCE--BIOKIMIYA 1970, 35(2), 247-56  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--CHLOROPLAST, PROTEIN SYNTHESIS, DNA  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3009/0196 STEP NO--UR/0218/10/035/002/0241/0256  
CIRC ACCESSION NO--AP0139059  
UNCLASSIFIED

USSR

UDC 539.384/.385

BAKHTIYAROV, I. A., ALIYEV, K. A., GASANOV, E. E.

"Twisting of Prismatic Beams Weakened by a Nonaxial Cylindrical Cavity"

Uch. zap. Azerb. in-t nefti i khimii (Scientific Notes of Azerbaijan Institute of Oil and Chemistry), 1972, Series 9, No. 4, pp 57-62 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V78)

Translation: The problem of the twisting of prismatic rods, the cross section of which is a doubly connected region bounded from the outside by an ellipse or a right polygon with smoothed angles and from within by an eccentrically located circumference, is solved. The outer contour is reflected on a unit circumference with the aid of a two-term function of a complex variable. The stress function is compiled in the form of the sum of two infinite series that are regular in the region considered. Determination of the coefficients of the series is reduced to a simultaneous solution of two groups of systems of infinite algebraic linear equations. Particular examples of the problem are given, where the external contour is an ellipse, a curvilinear square, or a curvilinear hexagonal. 6 ref. K. V. Solyanik-Krassa.

USSR

SERBINENKO, M. V., and ALIMYAN, E. S., Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenova, Vol 59, No 6, Jun 73, pp 849-854

of inactivation. In both stages vertical connections between brain formations predominated over horizontal connections; the horizontal connections between the right and left temporal regions of the cortex and between the right and left hippocampus were only weakly pronounced. As indicated by the coefficients of cross-correlation, there was a left-right asymmetry (predominance of ipsilateral over contralateral connections) in the interaction of the two temporal regions of the cortex with the reticular formation and of the latter with the left and right hippocampus.

USSR

UDC 612.82

SERBINENKO, M. V., and ALIMYAN, E. S.

"An Estimation of the Integrating Activity of the Brain on the Example of the Orientation Reaction"

Leningrad, Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenova, Vol 59, No 6, Jun 73, pp 849-854

Abstract: The cross-correlation of the EEG response of various sections of the brain was determined in experiments on rabbits in which an orientation reaction of the defensive type was induced by a sound stimulus. Implanted electrodes were applied. The EEG responses from the temporal area of the cortex of both hemispheres, two symmetrical points of the left and right dorsal hippocampus, the reticular formation of the middle brain, and the septum were recorded by means of a multichannel electroencephalograph. The EEG signals were transformed on a magnetic code recorder. The experimental data were used to calculate by means of a computer the functions of cross-correlation between different brain formations taken in sets of two. The coefficients of cross-correlation increased during the stage in which the orientation reaction was activated and then decreased during the period 1/2

USSR

ALIMPIYEV, S. S., KARLOV, N. V., Physics Institute imeni P. N. Lebedev,  
Academy of Sciences of the USSR

"Photon Echo in Molecular Gases  $\text{BCl}_3$  and  $\text{SF}_6$ "

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 63, No 2(8),  
Aug 72, pp 482-490

Abstract: The photon echo effect is studied in molecular gases  $\text{BCl}_3$  and  $\text{SF}_6$ , and the transverse relaxation time  $T_2$  is measured in these gases. The polarization dependence of the photon echo in  $\text{SF}_6$  is studied on several  $\text{CO}_2$  laser emission lines, and it is found that the absorbing transition of the Q-branch with higher quantum angular momentum is responsible for formation of the echo on  $947.73 \text{ cm}^{-1}$  [P(16)] in  $\text{SF}_6$ . The transitions responsible for echos on  $944.15 \text{ cm}^{-1}$  [P(20)] and  $945.94 \text{ cm}^{-1}$  [P(18)] are also strongly degenerate; however, a more detailed analysis of the phenomenon of photon echo in gases will be required for final identification of the modes of these transitions.

1/1

USSR

UDC 621.365.82

ALIMPIYEV, S. S., and KARLOV, N. V.

"The Breakdown of the Super Radiative State of the  $SF_6$  Molecule in the Photon Echo"

Kratkiye soobshch. apo fiz. (Brief Communications on Physics), No 1, 1973, pp 17-21, RZh-Fizika, No 9, Sep 73, Abstract No 90796

Translation: The photon echo in the excitation of  $SF_6$  by pulsed radiations from a  $CO_2$  laser is investigated. The relationship between the echo signal and the concentrations of gas is measured. It is shown that at high pressures (over  $30 \cdot 10^{-3}$  mm of mercury) this relationship deviates substantially from the quadratic, making it possible to determine the time of breakdown of the superradiative state. Six bibliographic citations. Kh. V.

1/1

2/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70  
CIRC ACCESSION NO--AP0129974  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOR TREATMENT OF REFLECTED AND  
REFLEX SYNDROMES OF THE CERVICAL AND LUMBAR OSTECHONDROSIS, IN 92  
PATIENTS AFTER CLINICO ROENTGENOGRAPHIC EXAMINATION WITH USE OF  
DISCOGRAPHY THE AUTHORS APPLIED THE NOVOCAIN AND ALCOHOL NOVOCAIN  
BLOCKADES OF THE DISCS. THE NOVOCAIN INTRADISCAL BLOCKADE AND  
DECEPTION PROVED TO BE A SIMPLE AND EFFECTIVE METHOD OF TREATMENT OF  
REFLEX AND REFLECTED SYNDROMES OF SPINE OSTECHONDROSIS.  
FACILITY: KAFEDRY NEYROKHIRURGII NOVOKUZNetskOGO INSTITUTA  
USOVERSHENSTVOVANIYA VRACHEY.

UNCLASSIFIED



1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--INTRADISCAL BLOCKADE AND DERECEPTION IN THE TREATMENT OF  
DISCALGETIC SYNDROMES OF OSTEOCHONDROSIS OF THE SPINE -O-  
AUTHOR-(02)-DOLGUN, A.P., ALIMPIYEV, I.N.

COUNTRY OF INFO--USSR

SOURCE--ORTOPEDIYA, TRAVMATOLOGGIYA I PROTEZIROVANIYE, 1970, NR 6, PP 36-40

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BONE DISEASE, ANALGESIC DRUG, SYNDROME

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0909

STEP NO--UK/9115/70/000/006/0036/0040

CIRC ACCESSION NO--AP0129974

UNCLASSIFIED

Acc. Nr.: AN0104123

"A SERIES OF INVESTIGATIONS INTO THE DYNAMICS OF A BODY WITH FLUID-FILLED CAVITIES", /65-68/, BY N. N. MOISEYEV, A. A. PETROV, V. V. RUMYANTSEV AND F. L. CHERNOUSKO AND "ULTRA HIGH PRECISION JIG BORING MILLS WITH 1,000 X 1,600 AND 1,400 X 2,240 MM PLATES", BY A. I. KIRYANOV, V. G. ABRAMOVICH, I. V. GUTKIN, A. S. ALIBEKOV, G. B. PAUKOV, AND A. S. YEGUDKIN, HAVE BEEN SUBMITTED BY THE COMPUTATION CENTER OF THE ACADEMY OF SCIENCES AND THE MINISTRY OF THE MACHINE TOOL CONSTRUCTION AND TOOL INDUSTRY, RESPECTIVELY.

"THE RADICALLY IMPROVED MELTING TECHNOLOGY OF CRITICAL-PURPOSE HIGH-ALLOY STEELS AND ALLOYS OF IMPROVED QUALITY ACHIEVED BY THE INERT GAS TREATMENT OUTSIDE THE FURNACE", BY YU. V. GERASIMOV, O. M. CHEKHOMOV, N. V. SIDOROV, S. K. FILATOV, B. A. CHERNOMYRIN, R. M. KHAYRUTDINOV, I. P. BARMOTIN, L. K. KOSYREV, K. P. BARMOTIN, N. N. VLASOV, P. I. MELIKHOV, AND N. A. TULIN, HAS BEEN SUBMITTED BY THE ZLATOUST METALLURGICAL PLANT.

2/2

Reel/Frame  
19870556

ALIMPIYEV A.S.

Acc. Nr.: AN0104123

Ref. Code: 7189003

TITLE-- ANNOUNCEMENT OF THE COMMITTEE ON LENIN AND STATE PRIZES, U.S.S.R. 4

NEWSPAPER-- IZVESTIYA, MAY 28, 1970, P 4, COLS 1-5

ABSTRACT-- NINETY ONE BASIC AND APPLIED RESEARCH WORKS HAVE BEEN NOMINATED FOR THE STATE PRIZES. TWO OF THESE, "THE MULTI-PURPOSE INDUSTRIAL HELICOPTER KA-26", BY N. I. KAMOV, V. B. ALPEROVICH, V. B. BARSHEVSKIY, A. A. DMITRIYEV, G. I. IOFFE, M. A. KUPCHENKO, L. A. POTASHNIK, N. N. PRIOROV, A. G. SATAROV, I. M. VEDENTSEV, S. B. BREN, AND V. A. NAZAROV, AND "THE DEVELOPMENT OF TURBOFAN JET ENGINES NK-8 AND NK-8-4, AND THE DEVELOPMENT AND REDUCTION TO SERIAL PRODUCTION A SYSTEM OF TECHNOLOGICAL PROCESSES WHICH ASSURED WIDE USES FOR TITANIUM ALLOYS", BY N. D. KUZNETSOV, M. T. VASILISHIN, V. A. KURGANOV, P. M. MARKIN, V. D. RADCHENKO, P. A. SUKHOV, A. A. MUKHIN, V. G. SHITOV, G. I. MUSHENKO, L. A. SHKODO, AND G. P. DOLGOLENKO, HAVE BEEN SUBMITTED BY THE MINISTRY OF THE AVIATION INDUSTRY.

1/2

Reel/Frame  
19870555

USSR

UDC: 532.56.01.001.5

ALIMPIYEV, A. I., KAMONOV, V. R., NIKONOV, M. P., Novosibirsk

"Energy Spectra of Velocity Pulsations in a Turbulent Boundary Layer on a Permeable Plate"

Novosibirsk, Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No. 3, May/Jun 73, pp 115-119

Abstract: The paper gives the results of measurements of pulsations of a turbulent boundary layer on a flat permeable plate over a range of variation of the blow-in parameter from 0 to 20. It is shown that in the case of supercritical blow-in there is a zone close to the surface in which the energy spectra of velocity pulsations do not change with increasing distance from the surface, and differ from the spectra in the main body of the boundary layer.

1/1

2/2 019 UNCLASSIFIED PROCESSING DATE--1900170  
 CIRC ACCESSION NO--AP0120878  
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AIM OF THE PRESENT WORK WAS THE STUDIES OF FATTY ACID CONTENT OF BLOOD SERUM LIPIDS AND FOLLOWING FRACTION: CHOLESTEROL ESTERS, TRIGLYCERIDES, NONESTERIFIED FATTY ACIDS BOTH IN HEALTHY MEN AND IN PATIENTS WITH ATHEROSCLEROSIS BY MEANS OF GAS LIQUID CHROMATOGRAPHY. THE STUDY WAS CONDUCTED ON 40 PATIENTS 45-49 YEARS OLD WITH INFARCTION CAUSED BY HYPERTENSION AT II-III STAGES. HYPERTENSION WAS COMPLICATED BY CORONARY ATHEROSCLEROSIS. 40 HEALTHY MEN WERE USED AS A CONTROL. IN PATIENTS WITH ATHEROSCLEROSIS THE FALL IN UNSATURATED FATTY ACID CONTENT OF BLOOD SERUM LIPIDS WAS DEMONSTRATED. THE CHARACTERISTIC FEATURE IN CHANGES OF ACID SATURATION IS THE SHARP DECREASE IN LINOLEIC ACID CONTENT IN SERUM LIPIDS, THE FALL IN ARACHIDONIC ACID LEVEL, AND INCREASE IN EUCOSETRIENIC ACID. THE BASIC ACIDS OF CHOLESTEROL ESTERS WERE OLEIC AND LINOLEIC ACIDS. IN PATIENTS WITH ATHEROSCLEROSIS THE CONTENT OF SATURATED AND MONOENIC ACIDS WAS INCREASED, BUT THE FALL IN LINOLEIC ACID LEVEL WAS DEMONSTRATED. TRIGLYCERIDES FRACTION OF BLOOD SERUM OF HEALTHY MEN WAS CHARACTERIZED BY THE INCREASED CONTENT OF PALMIC AND OLEIC ACIDS. THE PATIENTS WITH ATHEROSCLEROSIS WERE CHARACTERIZED BY ELEVATED LEVEL OF SATURATED AND MONOENIC ACIDS AND BY THE DECREASE IN LINOLEIC ACID CONTENT. NONESTERIFIED SERUM FATTY ACIDS MOSTLY CONTAIN PALMIC AND OLEIC ACIDS. IN PATIENTS WITH ATHEROSCLEROSIS THE CONTENT OF TRIENIC ACIDS IS INCREASED AND THAT OF MONOENIC IS DECREASED. THE MOST PRONOUNCED INCREASE WAS NOTED IN CASE OF ACIDS WITH UNEVEN CARBON ATOMS. FACILITY: CHAIR OF BIOCHEMISTRY MEDICAL INSTITUTE, VLADIVOSTOK.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--14OCT70  
TITLE--FATTY ACIDS CONTENT OF BLOOD SERUM LIPIDS AT ATHEROSCLEROSIS -U-

AUTHOR--(02)-ALIMOVA, YE.K., ENDAKOVA, E.A.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 3, PP 310-314

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FATTY ACID, BLOOD SERUM, LIPID, ATHEROSCLEROSIS, CHOLESTEROL,  
HYPERTENSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REL/FRAME--1976/0179

STEP NO--UR/0301/107016/10170319/1416

CIRC ACCESSION NO--AP0120878

UNCLASSIFIED

USSR

UDC 612.015.32

ALIMOVA, Ye. K., KIRYUKOVA, and SHEPELEV, A. P., Biochemistry Department,  
Rostov-on-Don Medical Institute

"Dynamics of Some Indexes of Lipid Metabolism After Acute Hyperthermia"

Leningrad, Fiziologicheskii Zhurnal SSSR, No 8, 1971, pp 1,188-1,191

Abstract: Elevating the body temperature of dogs by 1° slightly increased the content of total lipids, nonesterified fatty acids (NFA), lipid phosphorus, and free and esterified cholesterol in the lungs and amount of NFA in the liver. A 5-6° elevation of temperature, which proved to be lethal, further increased the content of NFA and lipid phosphorus in the lungs while lowering total lipids and total cholesterol. All the indexes of lipid metabolism decreased in the liver. After the rectal temperature was raised 2 to 3° and hyperthermia halted, all the indexes in the liver returned to normal except NFA, which continued to increase. Meanwhile the amount of NFA in the lungs dropped to the original level while the content of total lipids, lipid phosphorus, and free and esterified cholesterol increased. The authors believe the edema of the lungs and brain, change in permeability of the blood-brain barrier, lysis of erythrocytes, and hemorrhages observed in overheated animals may be due to increased permeability resulting from structural changes in the lipids of the cell membranes.

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USSR

ALIMOVA, Ye. K., et al., Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov,  
Vol 59, No 5, 1973, pp 814-818

oxidation of NEFA in skeletal muscles is interpreted as a compensatory process  
tending to increase heat production in the cooled body, while the altered lipid  
metabolism in the lungs probably reflects accelerated production of the alveo-  
lar surfactant which reduces water diffusion and heat loss due to evaporation.

2/2

- 40 -



USSR

UDC 612.58+612.015.32

ALIMOVA, Ye. K., MAKSIMENKO, V. A., and SHEPELEV, A. P., Chair of Biochemistry, Medical Institute, Rostov-na-Donu

"Changes in Lipid Metabolism at Various Stages of Acute Experimental Hypothermia"

Leningrad, Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenov, Vol 59, No 5, 1973, pp 814-818

Abstract: In unanesthetized dogs whose body temperature is lowered at a rate of 2-2.5°C/hr by application of ice packs, the initial response (prior to fall in body temperature) consists of an increase in total lipids and nonesterified fatty acids (NEFA) in arterial blood; a rise in total cholesterol in the liver and a fall in the lungs and skeletal muscles; and a fall in lipid phosphorus in the liver and skeletal muscles. Reduction of body temperature by 8-10°C causes a further increase in NEFA in arterial blood and a partial return of total lipids to the control value. Total cholesterol becomes normal in the liver and lungs, while lipid phosphorus increases in the lungs and decreases in skeletal muscles. When body temperature is reduced by 18-20°C (apronal period), total cholesterol increases in the liver and lungs, NEFA concentration decreases (relative to the preceding level) in the liver and lungs and increases in skeletal muscles, while lipid phosphorus decreases everywhere. The intensified

1/2

USSR

UDC 669.295.004.2

ALIMOVA, N. A., KARVATSEKAYA, R. A., USACHEVA, L. A., and KOVALEV, V. YA.

"Pilot Plant Experiments on Purification of Waste Water to Remove Suspended Materials and Oils"

Sb. tr. Vses. n.-i. i proyekt. in-t titana [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 143-145, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No. 1 G198 by the authors).

Translation: Results are presented from industrial tests of a method for purification of titanium plant waste waters to remove suspended material and oils by mixing neutralized and little-contaminated water in a ratio of 1:2.5 or 1:2, introduction of polyacrylamide at 0.1-0.2% of the weight of suspended materials, and subsequent settling for one hour. With this mode of settling, the waste water becomes clear and colorless in 75% of its volume; this clear volume contains 10.4% mg/l suspended material, and no oil. The content of solids in the lower portion is about 2%, water 98%. After five hours settling, the compaction of the sediment is practically complete; the content of solids is then about 3.6%. 1 figure; 2 tables.

1/1

USSR

UDC 519.21

ALIMOVA, M. M.

"Topological Path-Field and Martingales"

[Tr.] Tashkent, Politekhn. In-ta [(Works) of Tashkent Polytechnical Institute], No 56, 1970, pp 20-56, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V48 by B. Rogozin).

Translation: Known results related to Martingales are presented.